

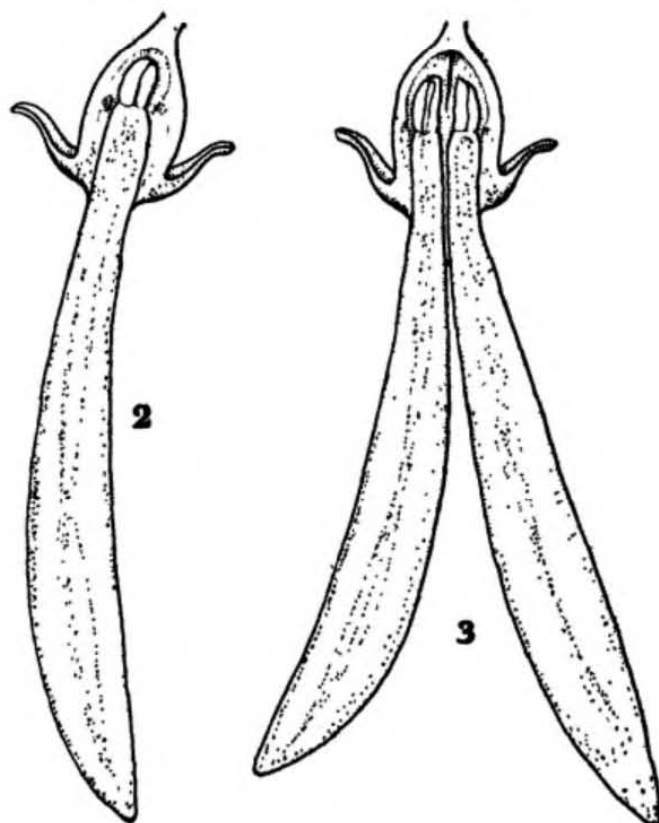
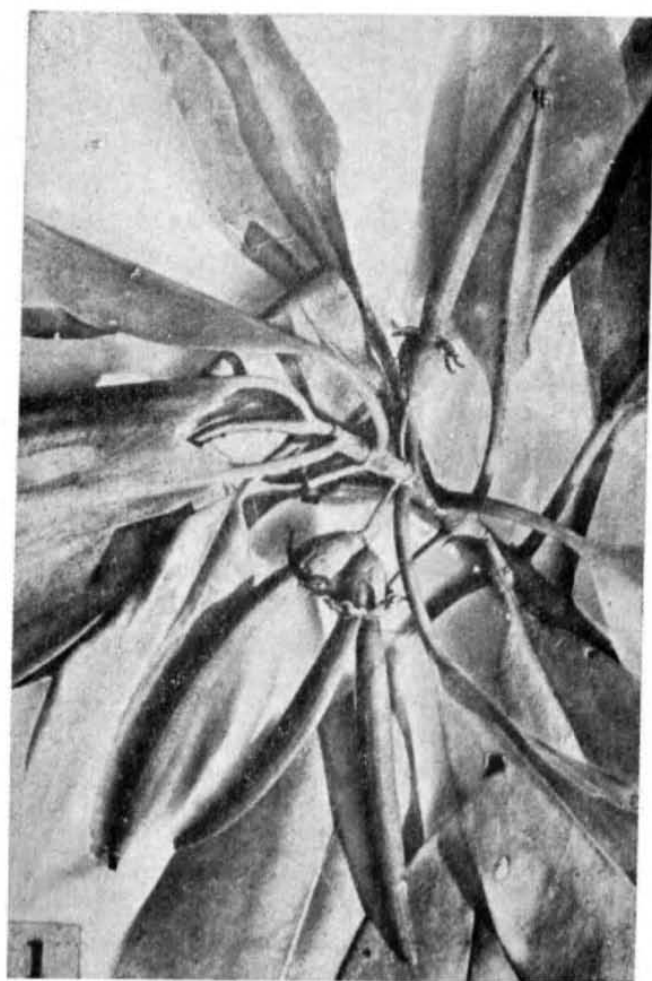
ATYPICAL VIVIPAROUS CONDITION IN *BRUGUIERA CYLINDRICA* (L.) BL. (RHIZOPHORACEAE)

During a recent study tour along the coasts of Andaman and Nicobar islands, we saw the unusual development of two pendent seedlings in a single fruit of *Bruguiera cylindrica* growing near the sea-shore at Havelock island. True vivipary, that is, the seed germination while still attached to the fruit stock is confined to four mangrove genera: *Bruguiera*, *Ceriops*, *Kandelia* and *Rhizophora* of the Rhizophoraceae. Instances of development of double or triple seedlings have been reported only in species of *Rhizophora* (Guppy, 1906; Ridley, 1930;

De Fonseca and Balasubramanian, 1972; Rajagopalan and Natarajan, 1952; Kumar and Joshi, 1942). As far as we are aware the double seedling condition is the first record for *Bruguiera cylindrica*.

B. cylindrica is a typical mangrove plant scarcely distributed on the inner side of the tidal mud banks. This is recognised by columnar trunk basally buttressed by geniculate pneumatophores, small-sized flowers borne on pedunculate cymes, cup-shaped calyx; lobes reflexed in fruit; petals with 8 apical cilia; 2-loculed inferior ovary with one to two ovules in each locule and cylindrical hypocotyl up to 9 cm long.

Our observations of the internal features revealed that in the normal viviparous fruit the cotyledons are disposed in a single locule,



A typical viviparous condition in *Bruguiera cylindrica* (L.) Bl.

Figs. 1-3 : 1. Fruits as occur in the species in nature showing single and double seedlings in the fruits *in situ*.
2. Single pendent seedling in the fruit, 3. Double pendent seedling in the fruit.

lobed at the top and attached basally to emerging hypocotyl. Further, the endosperm is found to be thin-layered dome-shaped covering over the cotyledons. As a contrast to this, the cotyledons of the atypical specimen are lobed, horn-shaped bodies developed in each of the two locules separated by a distinct wall. They are surrounded by thin endosperm tissue of their own and attached at the distal end to the emerging hypocotyls. Further, the emergent seedlings do not show any difference in size and shape at maturity in comparison with the typical pendent seedlings (Figs. 1-3). This clearly shows that the two independent ovules of the bilocular ovary have been fertilised independently, resulting in the double-seedling condition. This specimen is deposited in the Andaman and Nicobar Circle

Herbarium (PBL), Botanical Survey of India, Port Blair.

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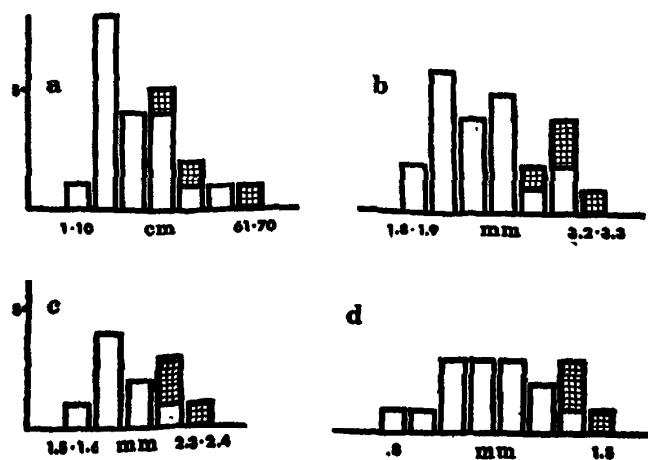
A NOTE ON *LINUM MYSORENCE*

This note on *Linum mysorence* began with an inquiry into some of the specific features of the species, needed for the preparation of a general treatment of section *Linopsis* to which it belongs.

Of the first collections examined some were from the Bombay area, others from Sri Lanka. The latter were consistently larger in most measurements and it seemed worthwhile to explore the species throughout its range to see if there might be two distinct entities. To this end material was borrowed from BM, CAL, K, NY and US, to the curators of which appreciation is expressed.

There is considerable variation within *Linum mysorence*. For example, it is usually described as having styles basally united, but many specimens have separate styles. Style union is a very stable feature in almost every other species of the genus, but in *L. mysorence* it is but one of the

variable characteristics. When a broad sampling of Indian plants is measured, it reveals that although they tend to be smaller in stature and to have smaller leaves and floral parts than those of Sri Lanka, the measurements overlap in each instance



Figs. a-d : Comparison of collections of *Linum mysorence* from India and Sri Lanka (cross-hatched) in plant height. (a) Sepal length. (b) Fruit length. (c) Style length. (d) Number of specimens examined shown at the left.